

International Journal of Biometeorology

Journal of the International Society of Biometeorology

edited by

W. H. Weihe
Zürich

and

U. Blum
Raleigh

VOLUME 25

1981

Published by Swets & Zeitlinger B.V., Lisse

International Journal of Biometeorology

Journal of the International Society of Biometeorology

Volume 25

1981

1981

1981

VOLUME 25

1981

Published by Swets & Zeitlinger B.V., Amsterdam

Typesetting: Hoi Studio B.V., Rotterdam

Printed in The Netherlands by Offsetdrukkerij Kanters B.V., Alblasterdam

© Copyright 1981 by Swets & Zeitlinger B.V., Amsterdam

CONTENTS OF VOLUME 25

	Page
Relative Influence of City Structure on Canopy Photosynthesis <i>P. A. O'Rourke and W. H. Terjung</i>	1
Acclimatization of Eucalypts under Semi-Arid Conditions <i>Y. Reves and D. Eisikowitch</i>	21
Effects of Atmospheric Humidity on Net Photosynthesis, Transpiration, and Stomatal Resistance. <i>Hydrocotyle umbellata</i> L. and <i>Hydrocotyle</i> <i>bonariensis</i> Lam. <i>D. Overdieck and B. R. Strain</i>	29
Weekly Headache Periodicity and the Effect of Weather Changes on Headache <i>P. O. Osterman, K. G. Lövstrand, P. O. Lundberg, S. Lundquist and C. Muhr</i>	39
Body Water Metabolism in High Altitude Natives During and After a Stay at Sea Level <i>S. C. Jain, Jaya Bardhan, Y. V. Swamy, A. Grover and H. S. Nayar</i>	47
Effects of Air Ions on Some Aspects of Learning and Memory of Rats and Mice <i>J. M. Olivereau and J. F. Lambert</i>	53
Influence of Air Ions on Brain Activity Induced by Electrical Stimulation in the Rat <i>J. M. Olivereau, J. F. Lambert and A. Truong-Ngoc</i>	63
Influence of Artificial Air Ionization on the Electroencephalogram of the Awake Rat <i>J. F. Lambert, J. M. Olivereau and A. Truong-Ngoc</i>	71
Abstracts of the Seventeenth Annual Meeting of the Japanese Society of Biometeorology, Osaka, 21-22 November 1978	77
Towards a Psycho-Physiological Model of Thermal Perception <i>A. Auliciems</i>	109
Biometeorological Norm as Tolerance Interval of Man to Weather-Stimuli <i>Maria Baranowska and B. Gabryl</i>	123
Temperatures of Expired Air under Varying Climatic Conditions <i>P. Höppe</i>	127
Simulated VLFields as a Risk Factor of Thrombosis <i>E. Jacobi, O. Richter and Getrud Krüskemper</i>	133
Plant Damage Produced by the Passage of Low Level Direct Current. I. The Nature of the Damage . . <i>F. X. Hart, M. J. Mudano and A. A. Atchley</i>	143

	Page
Plant Damage Produced by the Passage of Low Level Direct Current. II. Further Observations and Possible Mechanisms	
..... <i>F. X. Hart, M. J. Mudano and A. A. Atchley</i>	151
Size Variation of <i>Acacia caven</i> (Leguminosae) Pods along a Climatic Gradient in Chile	
..... <i>J. R. Gutiérrez and J. J. Armesto</i>	161
Thermal Comfort and Lactation Yields of Dairy Cows Grazed on Farms in a Pasture-Based Feed System in Eastern New South Wales, Australia ..	
..... <i>D. Dragovich</i>	167
Incidence of Mesoscale Convergence Lines as Input to Spruce Budworm Control Strategies	
..... <i>H. H. Neumann and E. I. Mukammal</i>	175
Twenty-five Years International Society of Biometeorology ...	<i>H. Lieth</i> 189
Physiological Characteristics of Cold Acclimatization in Man	
..... <i>Lazar Mathew, S. S. Purkayastha, A. Jayashankar and H. S. Nayar</i>	191
Effects of Cooling on Certain Blood Constituents in Relation to Reproduc- tive Behaviour in Buffaloes	
..... <i>S. N. Mehta, P. C. Gangwar, R. K. Srivastava and D. P. Dhingra</i>	199
Electrocardiographic Observations in High Altitude Residents of Nepal and Bolivia	
..... <i>Jeanne Raynaud, P. Valeix, L. Drouet, P. Escourrou and J. Durand</i>	205
Idiopathic Menstrual Disorders in Airline Stewardesses. A Possible Origin from Solar Radiation of Heavy Magnetic Particles	
..... <i>F. W. Cope</i>	219
The Survival of the Free Living Stages of <i>Ostertagia circumcincta</i> during Drought	
..... <i>T. E. Gibson, C. Everett and J. Whitehead</i>	223
Effects of Hyperthermia on Enzymes and Electrolytes in Blood and Cerebrospinal Fluid in Dogs	
..... <i>K. Deswal and I. S. Chohan</i>	227
Effects of Fasting on Maximum Thermogenesis in Temperature- Accli- mated Rats	
..... <i>L. C. H. Wang</i>	235
A Ventilation and Odor Test Facility	<i>L. G. Berglund and W. S. Cain</i> 243
Central Nervous versus Total Body Thermosensitivity of the Duck	
..... <i>E. Simon, R. Martin and Ch. Simon-Oppermann</i>	249
Metabolic Response of <i>Danaüs archippus</i> and <i>Saccharomyces cerevisiae</i> to Weak Oscillatory Magnetic Fields	
..... <i>D. N. Russell and S. J. Webb</i>	257

Relationship Between the Atmospheric Pulse Rate in the 10 and 27 kHz Range, Air Mass Movements and the Diffusion Time of Ions in Gelatin Films	<i>H. Baumer and J. Eichmeier</i>	263
An Approach to the Pheno-Climatic Typology and its Pattern in the Mountainous Areas of Poland	<i>Barbara Obrebska-Starkłowa</i>	269
Seasonality of Conception in Human Populations in Chile	<i>E. R. Hajek, J. R. Gutiérrez and G. Espinosa</i>	281
The Oxygen Consuming Systems of the Liver of Mice Exposed to Simulated High Altitude	<i>K. Rivera, R. Aguilar, C. Burgos and J. Alvarez</i>	293
Visible and Ultraviolet Reflectance Characteristics of Arctic Homeotherms	<i>P. S. Reynolds and D. M. Lavigne</i>	299
Electroculture for Crop Enhancement by Air Anions	<i>H. A. Pohl and G. W. Todd</i>	309
Effects of Air Ions on the Neonatal Growth of Laboratory Rats	<i>S. M. Hinsull, D. Bellamy and E. L. Head</i>	323
Measurement of Ion-Induced Noise in Atmospheric Counting Chambers, and a Novel Chamber for its Elimination	<i>N. F. Moody</i>	331
Fire-Induced Nutrient Losses in a Phryganic (East Mediterranean) Ecosystem	<i>M. Arianoutsou and N. S. Margaris</i>	341
Abstracts of the Eighteenth Annual Meeting of the Japanese Society of Biometeorology, Fukuoka, 21-22 November 1979		349
In Memoriam Lieut. General Dr. Inder Singh, PVSM, 1913-1980	<i>I. S. Chohan</i>	371
News:		
Harold Schaefer Elected President of Medical Climatology Institute		20
Journal on Weather Data		76
Recent Books:		
Three Plant/Climate Related Technical Notes from the World Meteorological Organization		46
Halldin, S. (ed.): Comparison of forest water and energy exchange models		70
Addendum		166

AUTHOR INDEX

- Abe, M., 91
 Agishi, Y., 95
 Aguilar, R., 293
 Alvarez, J., 293
 Araki, T., 101, 354
 Arianoutsou, M., 341
 Armesto, J. J., 161
 Asahina, K., 104
 Asayama, M., 81, 353
 Atchley, A. A., 143, 151
 Auliciems, A., 109
 Baranowska, M., 123
 Bardhan, J., 47
 Baumer, H., 263
 Bellamy, D., 323
 Berglund, L. G., 243
 Burgos, C., 293
 Cain, W. S., 243
 Chiba, Y., 82
 Chohan, I. S., 227, 371
 Cope, F. W., 219
 Deswal, K., 227
 Dhingra, D. P., 199
 Doi, K., 94, 350, 351
 Dragovich, D., 167
 Drouet, L., 205
 Durand, J., 205
 Eichmeier, J., 263
 Eisikowitch, D., 21
 Escourrou, P., 205
 Espinoza, G., 281
 Everett, C., 223
 Fujii, Y., 104, 105, 106, 353, 356
 Fujita, K., 100, 369
 Gabryl, B., 123
 Gangwar, P. C., 199
 Gibson, T. E., 223
 Gotoh, S., 88
 Grover, A., 47
 Gutiérrez, J. R., 161, 281
 Hajek, E. R., 281
 Hanawa, K., 99
 Hart, F. X., 143, 151
 Hasegawa, Y., 357
 Hayashi, O., 100
 Head, E. L., 323
 Hinsull, S. M., 323
 Hirata, H., 97
 Hirata, K., 81, 358
 Hirokawa, Y., 85
 Hiroshige, T., 84, 95, 358
 Honma, K., 84
 Höppe, P., 127
 Hori, S., 96, 354, 356, 368
 Hori, T., 78, 360, 361
 Horie, G., 85
 Horikoshi, T., 90
 Hoshiai, T., 88
 Ichimaru, Y., 104, 105
 Igawa, S., 99, 100, 368
 Iguchi, T., 77
 Ikawa, K., 358
 Ikeda, T., 97
 Inaba, K., 89
 Inomoto, T., 352
 Inoue, T., 88, 98, 362, 363
 Iriki, M., 77, 354
 Ishihara, U., 97
 Isobe, Y., 357
 Isoda, N., 85, 86, 87, 362
 Ito, M., 80, 81, 352, 353
 Itoh, K. B., 96
 Itoh, S., 84
 Iwami, K., 100, 369
 Jacobi, E., 133
 Jain, S. C., 47
 Jayashankar, A., 191
 Kaji, M., 103, 104, 105
 Kajii, H., 89
 Kakimoto, K., 369
 Kamiyama, K., 89, 90, 365
 Kashimura, O., 368
 Katayama, K., 107, 366
 Kawahari, Y., 88
 Kawakami, M., 79
 Kawashima, Y., 88
 Kikuchi, M., 100, 369
 Kita, H., 99, 100, 353, 368
 Kito, H., 364
 Kito, K., 90
 Kiyohara, T., 360, 361
 Kobayashi, Y., 85, 86, 87
 Kondo, Y., 359
 Kosaka, M., 352
 Koshihara, Y., 96, 349
 Kozawa, E., 77
 Kruskemper, Gertrud, 133
 Kubo, K., 79
 Kurahashi, M., 93, 349
 Kuroshima, A., 93, 94, 349, 350, 351
 Lambert, J. F., 53, 63, 71
 Lavigne, D. M., 299
 Lieth, H., 189
 Lövstrand, K. G., 39
 Lundberg, P. O., 39
 Lundquist, S., 39

Margaris, N. S., 341
 Martin, R., 249
 Mathew, Lazar, 191
 Matsui, J., 101, 102, 367
 Matsumoto, T., 105, 106
 Matsumoto, Y., 88
 Matsushita, K., 101
 Mayuzumi, M., 96, 368
 Mehta, S. N., 199
 Miki, K., 97
 Minamino, M., 362
 Minamino, O., 88, 362, 363
 Miura, T., 107, 365
 Miyagawa, T., 80, 81, 353
 Miyano, A., 89, 364
 Mizuguchi, T., 353
 Mohri, M., 81, 92, 359
 Momiyama, M. S., 103, 107
 Moody, N. F., 331
 Mori, K., 105, 106, 356
 Morimoto, T., 97
 Moriya, K., 95, 358
 Mudano, M. J., 143, 151
 Muhr, C., 39
 Mukammal, E. I., 175
 Murakami, M., 104, 105, 369
 Murakami, N., 79, 351
 Nagasaka, T., 81, 88, 92, 357, 358, 359
 Nakahara, H., 92
 Nakahara, M., 364
 Nakamura, M., 97, 356
 Nakamura, S., 85
 Nakashima, T., 360, 361
 Nakaya, M., 91
 Nakayama, T., 98, 355
 Namihira, G., 91
 Naruse, T., 89, 362, 363
 Nayar, H. S., 47, 191
 Nemoto, O., 90, 364
 Neumann, H. H., 175
 Nishimura, K., 86, 87
 Niwa, K., 98, 355
 Nomoto, S., 354
 Obrebska-Starkłowa, Barbara, 269
 Ogawa, T., 80, 81, 353
 Ohara, K., 93, 352, 357
 Ohnaka, T., 101, 102, 367
 Ohno, T., 94, 350, 351
 Ohnuki, Y., 98
 Ohwatari, N., 352
 Okuda, N., 93, 352
 Okuwaki, Y., 369
 Olivereau, J. M., 53, 63, 71
 O'Rourke, P. A., 1
 Osada, H., 83, 359
 Osterman, P. O., 39
 Ota, K., 88
 Overdieck, D., 29
 Pohl, H. A., 309
 Purkayastha, S. S., 191
 Raynaud, Jeanne, 205
 Reves, Y., 21
 Reynolds, P. S., 299
 Richter, O., 133
 Rivera, K., 293
 Russell, D. N., 257
 Saiki, H., 91
 Saiki, M., 91
 Sakaguchi, E., 83, 359
 Sakaguchi, T., 359
 Sakamoto-Momiyama, M., 366
 Sakiguchi, N., 105
 Sasaki, T., 82, 355
 Sato, T., 103, 107, 366
 Sekiya, K., 365
 Shibata, H., 81, 358
 Shibata, M., 360, 361
 Shimura, M., 107, 365
 Shiraki, K., 97
 Simon, E., 249
 Simon-Oppermann, Ch., 249
 Sohn, J. Y., 85, 86
 Srivastana, R. K., 199
 Strain, B. R., 29
 Sudoh, M., 91
 Sugano, Y., 81, 357
 Sugiyama, M., 100, 369
 Suzuki, T., 80
 Swamy, Y. V., 47
 Takaba, S., 359
 Takano, N., 359
 Takasu, K., 365
 Takeoka, M., 96, 349
 Tanaka, M., 101, 102, 367
 Tanaka, N., 96, 368
 Terjung, W. H., 1
 Tochiwara, T., 101
 Tochiwara, Y., 102, 367
 Toda, Y., 101, 354
 Todd, G. W., 309
 Tokura, H., 80
 Truong-Ngoc, A., 63, 71
 Tsujino, A., 101
 Tsujita, J., 96, 354, 368
 Tsukamoto, N., 85
 Tsunashima, K., 79
 Tsurutami, T., 80, 355
 Tsuzuki, S., 78, 355
 Ueda, G., 96, 349
 Valeix, P., 205

Wada, M., 364
Wang, L. C. H., 235
Watanabe, K., 104
Watanabe, M., 85
Watanabe, T., 88
Webb, S. J., 257
Whitehead, J., 223
Yahata, T., 93, 350
Yamaguchi, K., 86
Yamaguchi, T., 95
Yamamoto, S., 366
Yamaoka, S., 83

Yamazaki, S., 359
Yanaga, T., 103, 104, 105, 369
Yano, T., 106, 356
Yokoi, T., 103
Yokoyama, H., 92
Yorimoto, A., 99, 100
Yoshida, K., 101, 102, 367
Yoshimura, C., 80
Yoshiyama, T., 104
Yukawa, K., 97
Yurugi, K., 83, 359